

FIREARMS TESTING

Firearms testing includes bullets, cartridge cases, weapons function, safety and serial number restoration.

A. Comparison of Bullets, Cartridge Cases, and Shotshell Components:

1. Collect all fragments possible.
2. Package all fragments separately in tissue paper – do not use cotton.
NOTE: If from autopsy allow to air dry BEFORE packaging in paper. Rinsing the item may wash away trace evidence.
3. Label the source of each sample and indicate whether the sample is (K) Known or (Q) Questioned. **DO NOT MARK BULLET OR CASES!**

B. Weapons (Handle accordingly if fingerprinting is needed):

1. Record position of hammer (see example).
2. Unload and submit all available ammunition.
3. Package weapon and ammunition separately.
4. Use gun boxes and several zip ties to secure the weapon inside the box. Do not run zip ties down the barrel. Seal the box with evidence tape and initials.
5. Label appropriately (agency case number, item number, chain of custody).
6. Indicate all exams desired, i.e., serology, fingerprinting, firing condition, or serial number restoration.

NOTE: DO NOT DRYFIRE OR TESTFIRE THE WEAPON!

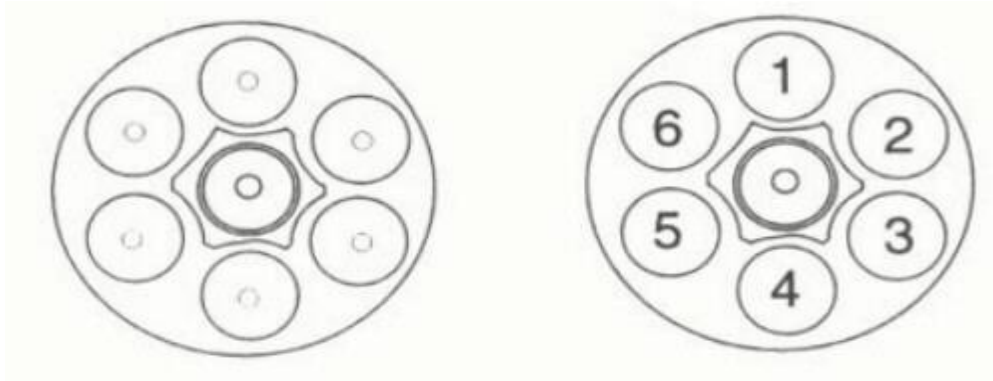
7. Marking ammunition recovered in weapons:

a. Revolvers:

- i. Facing rear of cylinder, draw a diagram as follows:

Appearance of cylinder as recovered.

Diagram to be made by officer recovering weapon.



- ii. Scratch arrow on rear face of cylinder to indicate the chamber position under hammer (in-line with barrel), when recovered. Then prepare diagram numbering in clockwise direction the remaining chambers, i.e., 2.3.4.5.6. etc.

b. Pistols:

- i. Remove magazine.
- ii. Unload chamber.
- iii. If needed, have all items checked for fingerprints.

C. Evidence for Distance Determination:

1. Record position of cylinder and ammunition.
2. Photograph the scene and autopsy with scale in photos.
3. Dry garments before packaging. Package by laying flat on butcher paper and **rolling**. Place paper in evidence envelope, evidence tape and initial seal.
4. Submit actual weapon and identical ammunition (different barrels and ammunition produce different results). Weapons package in boxes as described above.
5. Submit the incident and autopsy reports with the evidence.

D. Gunshot Residue: The laboratory does not test for GSR.

1. Studies show GSR remains on hands for 3 hours, on face for 8 hours and nasal cavity for 48 hours. Call forensic laboratory for proper collection technique.

REMEMBER: Once it is collected, it is stable and can be stored indefinitely. Has to be sent to an outside laboratory at agency expense.

E. Tool Marks:

1. This is a comparison test. You must submit the tool(s) and either the marked item or a photograph. The tool and marked object should be packaged separately.

NOTE: DO NOT ATTEMPT TO "FIT" TOOL INTO TOOL MARK!

F. Tools:

1. Package tool in wrapped and taped paper to prevent loss of trace evidence and damage to the surface of the tool.
2. Brace wrapped tool inside box to prevent the tool from sliding around and being Damaged. Place evidence tape and initials on container to seal.
3. Label the box appropriately (agency case number, item number, chain of custody).

G. Object from Crime Scene:

1. If possible, submit the whole item to the lab. Follow **General Packaging Instructions**.
2. If it is not possible to submit whole item: Photograph the item at close, medium and distant ranges and submit photos and negatives in evidence envelopes if using film. If using digital, burn directly onto a CD or DVD and package in an evidence envelope.
2. Call the forensic laboratory for assistance on casting tool mark.